

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-011335**Date Inspected:** 29-Dec-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspectors: Mr. Zhu Zhong Hai, Mr. Xu Xian Ping

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

**OBG BAY 5**

This QA Inspector observed ZPMC welder Ms. Gao Yulin, stencil 217805 is using flux cored welding process WPS-345-FCAW-2G(2F)-Repair add weld material to extend the length of traveler rail 11TR5-004. This QA Inspector observed a welding current of approximately 290 amps and 27.0 volts and Ms. Gao Yulin appears to be certified to make this weld. CWI Mr. X Xian Ping informed this QA Inspector that Ms. Gao Yulin is depositing weld passes on several different traveler rail weld joints and this allows additional time for each of the weld joints to cool prior to depositing additional weld material. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Ban Qiuyun, stencil 250353 is using flux cored welding process WPS-345-FCAW-2G(2F)-Repair add weld material to extend the length of traveler rail 11TR5-001 and an adjacent traveler rail. This QA Inspector observed a welding current of approximately 290 amps and 28.0 volts and Ms. Ban Qiuyun appears to be certified to make this weld. Items observed on this date appeared to generally

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## WELDING INSPECTION REPORT

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comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Li Yuan Zheng, stencil 217185 is using flux cored welding process WPS-345-FCAW-2G(2F)-Repair add weld material to extend the length of traveler rail 11TR5-002. This QA Inspector observed a welding current of approximately 290 amps and 28.0 volts and Mr. Li Yuan Zheng appears to be certified to make this weld. This QA Inspector observed Mr. Li Yuan Zheng is only welding on one traveler rail instead of rotating from one traveler rail to another traveler rail. As Mr. Li Yuan Zheng was preparing to make another weld pass this QA Inspector used a 230 degree Celsius temperature indicating crayon on the base material adjacent to where this welding had just been completed and the temperature indicating crayon melted, which indicates the base material is above 230 degrees Celsius. This QA Inspector informed ZPMC CWI Mr. Xu Xian Ping that the base material appear to be above 230 degrees Celsius and Mr. Xu Xian Ping used a laser temperature indicating device and Mr. Xu Xian Ping stated that the material is below 230 degrees Celsius. This QA Inspector showed Mr. Xu Xian Ping that a 230 degrees Celsius temperature indicating crayon is melting adjacent to the weld and that the 230 degree Celsius temperature indicating crayon is more accurate than the laser temperature device. Mr. Xu Xian Ping informed this QA Inspector that he will have the weld metal gouged out and after grinding, this area will be rewelded. Items observed on this date do not fully comply with applicable contract documents.

OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Zhang Quin Quan, stencil 044774 is using flux cored welding procedure WPS-B-T-2232-TC-U4b-F to make OBG corner assembly weld CA93-004. This QA Inspector observed a welding current of approximately 300 amps, 30.0 volts and Mr. Zhang Quin Quan appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wu Wanyong, stencil 050242 is using flux cored welding procedure WPS-B-T-2232-TC-U4b-F to make OBG corner assembly weld CA93-004. This QA Inspector observed a welding current of approximately 305 amps, 29.5 volts and Mr. Wu Wanyong appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

See Above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Dawson,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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